



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,169	02/17/2004	David J. Waller	200311815-1	1264
22879 7590 09/14/2007 HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			EXAMINER UHLENHAKE, JASON S	
			ART UNIT 2853	PAPER NUMBER
			MAIL DATE 09/14/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

MAILED
SEP 14 2007
GROUP 2800

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/780,169
Filing Date: February 17, 2004
Appellant(s): WALLER ET AL.

Todd A. Rathe
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 6/22/2007 appealing from the Office action mailed 9/28/2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows: The grounds of rejection for claims 1-2, 4-6, 9, 14-15 and 19 on page 7 are no longer accurate since the rejections are withdrawn. On page 7, the language should read "(2) whether the Examiner erred in rejecting claim 13 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,907,334 (Hirano et al)". On page 7, the language should read "(8) whether the Examiner erred in rejection g claim 19 under 35 U.S.C. § 103 (a) as being unpatentable over U.S. Patent No. 5,907,334 (Hirano et al) in view of U.S. Paten No. 5,587,729 (Lee).

Art Unit: 2853

Finally, on page 8 the language should read "(13) whether the Examiner erred in rejecting claim 50 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Publication No. 2004/0252154 (Griesemer et al) in view of US Patent No. 6,328,412 (Taylor et al), U.S. Patent Publication No. 2003/0169312 (Ota et al), and US Patent No. 6,172,691 (Belon et al)".

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,587,729	Lee et al	12-1996
5,907,334	Hirano et al	05-1999
5,325,151	Kimura et al	06-1994
2003/0169312	Ota et al	09-2003
6,357,851	Gaasch, Todd Michael	03-2002
2004/0046826	Schalk et al	03-2004
6,328,412	Taylor et al	12-2001
6,172,691	Belon et al	01-2001
2004/0252154	Griesemer et al	12-2004

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections – 35 U.S.C. § 102

Art Unit: 2853

9 (1). The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9(2) Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by Hirano et al (U.S. Pat. 5,907,334).

Hirano et al discloses:

- ***regarding claim 13***, first (10) and second (19) sleds, the first sled including a first engagement (37) structure and first and second retaining walls (1a, 1b) positioned on opposite sides of the first engagement structure, and the second sled including a second engagement (34) structure positioned adjacent the second retaining wall (Column 2, Lines 59 – 67; Column 3, Lines 1 – 19; Column 5, Lines 47 – 67; Column 6, Lines 1 – 11; Figures 1, 3)
- a servicing station drive structure (10, 19) movable between a disengaged position, a first engaged position (37), and a second engaged position (34), the drive structure in the first engaged position engaging the first engagement structure and the drive structure in the second engaged position engaging the second engagement structure (Column 5, Lines 47 – 67; Column 6, Lines 1 – 11; Figures 1, 3)
- a biasing member that biases the servicing station drive structure to move from the first engaged position to the second engaged position (Column 8, Lines 32-37)

9(3) Claims 31-35, 38-39, 42, 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Belon et al (U.S. Pat. 6,172,691).

Belon et al discloses:

- ***regarding claim 31***, a driveshaft (82); a sled (180) including a rack (198) adapted to selectively engage the driveshaft and a retaining wall (housing structure 52) positioned to retain the driveshaft on the rack in a zone (Column 7, Lines 28 – 30, Lines 45 – 55; Column 8, Lines 11 – 27)
- ***regarding claim 32***, the driveshaft is shiftable between a disengaged position and an engaged position where the driveshaft engages a powered gear and rack (Column 7, Lines 28 – 30, Lines 45 – 55; Column 8, Lines 11 – 27)
- ***regarding claim 33***, the powered gear is operatively connected to a power shaft (124) that, when the driveshaft is in the engaged position, the powered gear transmits power to the driveshaft (Column 5, Lines 17-35)
- ***regarding claim 34***, the powered gear is an idler gear and where the power shaft transmits power to the driveshaft through the idler gear (Column 7, Lines 28 – 30, Lines 45 – 55; Column 8, Lines 11 – 27)
- ***regarding claim 35***, a shift arm (146) that moves between an engaged position and a disengaged position, wherein movement of the shift arm (146) from the disengaged position to the engaged position moves the driveshaft into engagement with the idler gear and the rack (Column 7, Lines 28 – 30, Lines 45 – 55; Column 8, Lines 11 – 27)

Art Unit: 2853

- **regarding claim 38**, a motor (102) that drives the power shaft (Figure 4)
- **regarding claim 39**, a sled further includes a cap (182, 184), a wiper (186, 188) and a spittoon (68a, 68b)
- **regarding claim 42**, a sled (180) including an engagement structure (150, 152, 190 of Figure 4) and a retaining structure; a power shaft (124) that transmits power to a driveshaft (Column 2, Lines 5 – 17; Column 7, Lines 28 – 30, Lines 45 – 55; Column 8, Lines 11 – 27)
 - the driveshaft (82) movable between an engaged position and a disengaged position, the driveshaft in the engaged position engaging the power shaft (124) and the engagement structure (150, 152, 190, of Figure 4) of the sled (180) so as to transmit power from the power shaft (124) to the sled (180); the sled retaining structure (housing structure 52) retains the drive shaft in the engaged position in a predetermined zone of the retaining structure (Column 7, Lines 28 – 30, Lines 45 – 55; Column 8, Lines 11 – 27)
- **regarding claim 43**, a shift mechanism that moves between an actuated position and a non – actuated position, wherein movement of the shift mechanism from the non-actuated position to the actuated position moves the driveshaft from the disengaged position to the engaged position (Column 7, Lines 28 – 30, Lines 45 – 55; Column 8, Lines 11 – 27)

9(4) Claims 20-22, 24-28, 46-47, 51-54 are rejected under 35 U.S.C. 102(e) as being anticipated by Griesemer et al (U.S. Pub. 2004/0252154).

Griesemer et al discloses:

- ***regarding claim 20***, means for servicing the printhead, the means for servicing including means for retaining (maintenance house 68) and first and second means for engaging (Figures 4 – 5; Paragraphs 0008; 0044 – 0045; 0050)
- means for translating (86) the means for servicing (70) the printhead, the means for translating operable to move from a first translation position (guide members 88 within the guide slot 86) in engagement with the first means for engaging (wiping 92) to a second translating position (guide member 88 within the guide slot) in engagement with the second means for engaging (capping 94) (Figures 4 – 5; Paragraphs 0044 – 0045; 0050)
- wherein the means for retaining (maintenance house 68) includes a retaining region, and wherein the means for retaining retains the means for translating in the first translating position when the means for translating is positioned within the retaining region (Figures 4 – 5; Paragraphs 0008; 0044 – 0045; 0050)

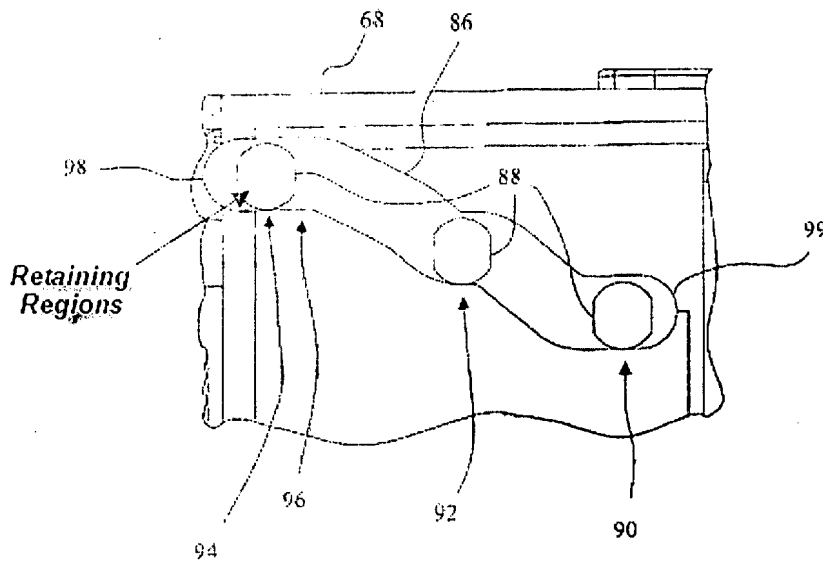


Fig. 5

- **regarding claim 21**, means for shifting the means for translating between a disengaged position and the first translation position, the means for shifting biased to shift the means for translating into the disengaged position in the absence of than external force on the means for shifting (Figures 4 – 5; Paragraphs 0008; 0044 – 0045; 0050)
- **regarding claim 24**, moving a translation device (70) into engagement with a retaining region (94, 92, or 90 of Figure 5) of a first servicing mechanism (Figures 4 – 5; Paragraphs 0008; 0034, 0044 – 0045; 0050)
- powering the translation device such that the first servicing mechanism is moved with respect to the translation device such that the translation device is positioned out of the retaining region (94, 92, or 90 of Figure 5) (Paragraphs 0030 – 0031, 0039, 0044 – 0045)

Art Unit: 2853

- moving the translation device into engagement with a second region of the servicing mechanism (Figures 4 – 5; Paragraphs 0008; 0034, 0044 – 0045; 0050)
- powering the translation device such that the second servicing mechanism is moved with respect to the translation device (Paragraphs 0030 – 0031, 0039, 0044 – 0045)
- ***regarding claim 25***, step of moving the translation device into engagement with the first servicing mechanism comprises moving a printhead carriage into contact with an actuation device so as to move the actuation device from a non actuated position to an actuated position, wherein movement of the actuation device from the non actuated position to the actuated position moves the translation device from a disengaged position into engagement with the first servicing mechanism (Paragraphs 0008 – 0009, 0037)
- ***regarding claim 26***, removing the printhead carriage from contact with the actuation device where after a retaining wall of the retaining region retains the translation device in engagement with the first servicing mechanism in the retaining region (Figure 5; Paragraphs 0034, 0044 – 0045)
- ***regarding claim 27***, powering the translation device such that the first servicing mechanism is moved with respect to the translation device such that the translation device is moved into an access region of the first servicing mechanism; and moving the translation device through the access region of the first servicing mechanism (Paragraphs 0030 – 0031, 0034, 0039, 0044 – 0045)

- **regarding claim 28**, the translation device is biased by a biasing member to move through the access region of the first servicing mechanism (Paragraph 0036)
- **regarding claim 46**, means for translating (86) a means for servicing (68) the printhead, the means for translating biased to move from a translating position and a non-translating position in the absence of an external force on the means for translating (Figures 4 – 5; Paragraphs 0008; 0044 – 0045; 0050)
- means for servicing the printhead, the means for servicing including means for retaining the means for translating in engagement with the means for servicing in a predetermined zone of engagement of the means for retaining (Figures 4 – 5; Paragraphs 0008; 0044 – 0045; 0050)
- **regarding claim 47**, means for shifting the means for translating between the translating position and the non-translation position, the means for shifting biased to translate the means for translating into the disengaged position in the absence of an external force on the manes for shifting (Figures 4 – 5; Paragraphs 0008; 0044 – 0045; 0050)
- **regarding claim 48 and claim 22**, the printhead is configured to selectively actuate the means for shifting by advancing into and out of contact with the means for shifting (Paragraph 0037, 0045)
- **regarding claim 49**, means for powering the means for translating, wherein the means for translating engages the means for servicing and the means for powering in the translating position (Paragraphs 0030 – 0031, 0034, 0039, 0044 – 0045)

- **regarding claim 51**, moving a translation device into engagement with a first region of a servicing mechanism (Figures 4 – 5; Paragraphs 0008; 0034, 0044 – 0045; 0050)
- powering the translation device such that the servicing mechanism is moved with respect to the translation device and such that a second region of the servicing mechanism is moved into engagement with the translation device, the second region retaining the translation device in contact with the servicing mechanism (Paragraphs 0030 – 0031, 0034, 0039, 0044 – 0045)
- **regarding claim 52**, moving the translation device comprises moving a printhead carriage into contact with an actuation device so as to move the actuation device from a non-actuated condition to an actuated condition, wherein movement of the actuation device from the non-actuated position to the actuated position moves the translation device from a disengaged position into engagement with the first region of the servicing mechanism (Paragraphs 0008 – 0009, 0037)
- **regarding claim 53**, removing the printhead carriage from contact with the actuation device, where after the translation device remains engaged with the servicing mechanism while the translation device is in contact with the second region of the servicing mechanism; thereafter, translating the servicing mechanism, such that the second region is moved with respect to the translation device, to service the printhead in the absence of the printhead carriage (Figure 5; Paragraphs 0034, 0044 – 0045)
- **regarding claim 54**, servicing mechanism such that the second region of the servicing mechanism is moved out of contact with the translation device, whereupon

the translation device is biased into the disengaged position (Figures 4 – 5; Paragraphs 0008; 0036, 0044 – 0045; 0050)

Claim Rejections - 35 USC § 103

9(5) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9(6) Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirano et al (U.S. Pat. 5,907,334) in view of Griesemer et al (U.S. Pub. 2004/0252154).

Hirano et al discloses all the claimed limitations above, except for the following:

- ***regarding claim 16***, a biasing member that biases the drive structure to move from the first engaged position to the disengaged position, the first retaining wall including a retaining region that retains the drive structure in the first engaged position and against biased movement to the disengaged position when the drive structure is positioned within the retaining region
- ***regarding claim 17***, a biasing member that biases the drive structure to move from the first engaged position to the second engaged position, the second

Art Unit: 2853

retaining wall including a retaining region that retains the drive structure in the first engaged position when the drive structure is positioned within the retaining region

- **regarding claim 18**, a shift arm that pivots between an actuated position and a non-actuated position to the actuated position moves the drive structure from the disengaged position to the first engaged position

- wherein the biasing member biases the shift arm to pivot from the actuated position to the non-actuated positions

- a printhead carriage operable to pivot the shift arm from the non-actuated position to the actuated position by overcoming a biasing force of the biasing member

Griesemer et al discloses:

- **regarding claim 16**, a biasing member that biases the drive structure to move from the first engaged position to the disengaged position, the first retaining wall including a retaining region that retains the drive structure in the first engaged position and against biased movement to the disengaged position when the drive structure is positioned within the retaining region (Figures 4 – 5; Paragraphs 0008; 0044 – 0045; 0050), for the purpose of guiding and securing a maintenance sled.

- **regarding claim 17**, a biasing member that biases the drive structure to move from the first engaged position to the second engaged position, the second retaining wall including a retaining region that retains the drive structure in the first engaged position when the drive structure is positioned within the retaining region (Figures 4 – 5; Paragraphs 0008; 0044 – 0045; 0050), for the purpose of guiding and securing a maintenance sled.

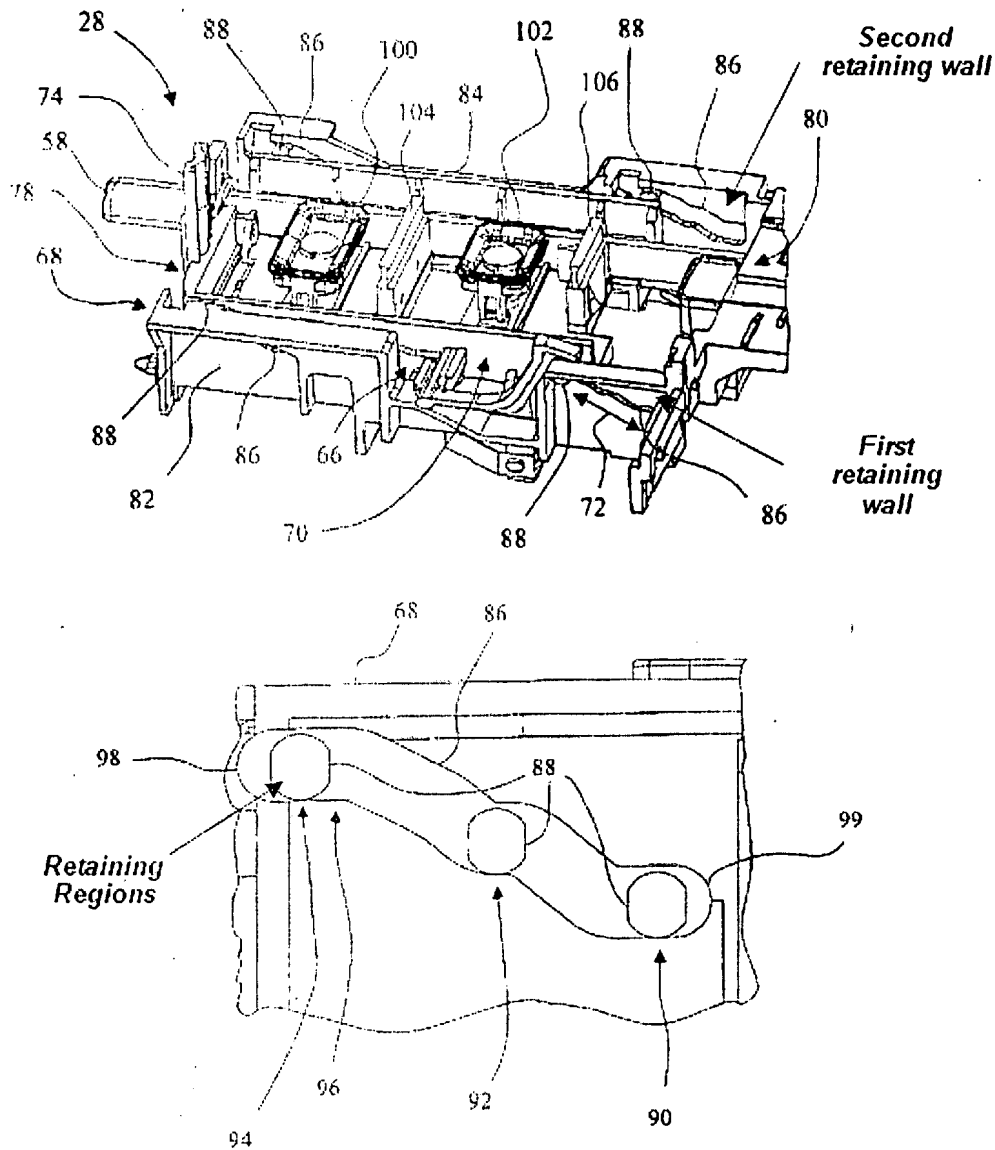


Fig. 5

Figures 4 and 5: Retaining walls

- **regarding claim 18**, a shift arm that pivots between an actuated position and a non-actuated position to the actuated position moves the drive structure from the disengaged position to the first engaged position (Paragraphs 0037, 0044 - 0045), for

Art Unit: 2853

the purpose of engaging the service station to the printhead when the printhead is in the service area.

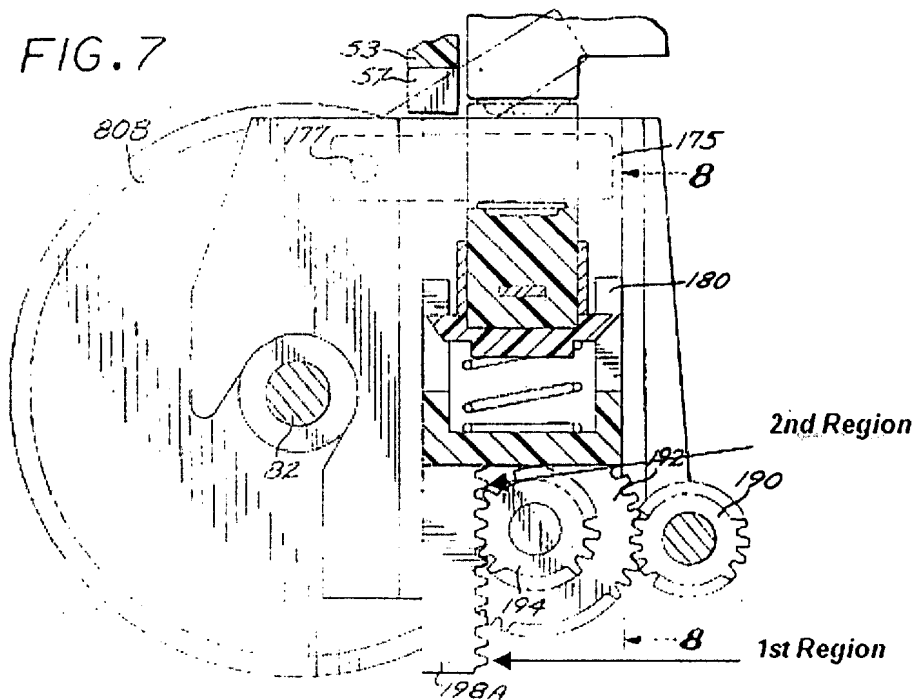
- wherein the biasing member biases the shift arm to pivot from the actuated position to the non-actuated positions; a printhead carriage operable to pivot the shift arm from the non-actuated position to the actuated position by overcoming a biasing force of the biasing member (Figures 4 – 5; Paragraphs 0008; 0036; 0044 – 0045; 0050), for the purpose of guiding and securing a maintenance sled.

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of Griesemer et al into the device of Hirano et al, for the purpose of guiding and securing the maintenance sled and engaging the service station to the printhead when the printhead is in the service area.

9(7) Claim 37 rejected under 35 U.S.C. 103(a) as being unpatentable over Belon et al (U.S. Pat. 6,172,691) as modified by Griesemer et al (U.S. Pat. 2004/0252154).as applied to claim 31 above, and further in view of Gaasch (U.S. Pat. 6,357,851)

Belon et al as modified by Griesemer et al discloses

- ***regarding claim 37***, retaining wall includes a first region and a second region, wherein powering of the driveshaft moves the driveshaft from the first region to the second region of the rack (Column 8, Lines 10 – 27)



Belon et al as modified by Griesemer et al does not disclose expressly the following:

- ***regarding claim 37***, movement of the driveshaft from the first region to the second region of the rack moves the shift arm out of engagement with the print head carriage

Gaasch discloses:

- ***regarding claim 37***, movement of the driveshaft from the first region to the second region of the rack moves the shift arm out of engagement with the print head carriage (Column 7, Lines 60 – 67; Column 8, Lines 1 – 25), for the purpose of allowing the printhead to move after engagement with a shift arm.

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of movement of the driveshaft from

the first region to the second region of the rack moves the shift arm out of engagement with the print head carriage as taught by Gaasch into the device of Belon et al as modified by Griesemer et al, for the purpose of allowing the printhead to move after engagement with a shift arm.

9(8) Claims 36, 40 - 41 44 – 45, 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belon et al (U.S. Pat. 6,172,691) in view of Griesemer et al (U.S. Pat. 2004/0252154).

Belon et al discloses all the claimed limitations except for the following:

- ***regarding claim 36***, a printhead carriage that moves the shift arm from the disengaged position to the engaged portion
- ***regarding claim 40***, shift arm includes a biasing element that biases the shift arm to move the driveshaft into the disengaged position when the driveshaft is not positioned in the zone of the retaining wall
- ***regarding claim 41***, driveshaft is in the disengaged position, the retaining wall interferes with the driveshaft thereby preventing movement of the sled
- ***regarding claim 44***, carriage movable between an engaged position and a disengaged position, wherein movement of the printhead carriage from the disengaged position to the engaged position moves the shift mechanism from the non-actuated position to the actuated position

- **regarding claim 45**, shift arm including a biasing member, the biasing member biasing the shift arm into the non-actuated position in the absence of an external force on the shift arm

- **regarding claim 55**, a biasing member coupled to the driveshaft for biasing the driveshaft out of engagement with the rack

Griesmer et al discloses:

- **regarding claim 36**, a printhead carriage that moves the shift arm from the disengaged position to the engaged portion (Paragraph 0037), for the purpose of engaging the service station to the printhead when the printhead is in the service area.

- **regarding claim 40**, shift arm includes a biasing element that biases the shift arm to move the driveshaft into the disengaged position when the driveshaft is not positioned in the zone of the retaining wall (76 of Figure 2; Paragraph 0036), for the purpose of moving a sled to the proper position.

- **regarding claim 41**, driveshaft is in the disengaged position, the retaining wall interferes with the driveshaft thereby preventing movement of the sled (Figure 2; Paragraphs 0036 – 0037, 0045), for the purpose of maintaining position of the sled.

- **regarding claim 44**, carriage movable between an engaged position and a disengaged position, wherein movement of the printhead carriage from the disengaged position to the engaged position moves the shift mechanism from the non – actuated position to the actuated position (Paragraphs 0037, 0044 - 0045), for the purpose of engaging the service station to the printhead when the printhead is in the service area.

Art Unit: 2853

- **regarding claim 45**, shift arm including a biasing member, the biasing member biasing the shift arm into the non-actuated position in the absence of an external force on the shift arm (Paragraph 0050), for the purpose of engaging the service station to the printhead when the printhead is in the service area.

- **regarding claim 55**, a biasing member coupled to the driveshaft for biasing the driveshaft out of engagement with the rack (Paragraph 0050), for the purpose of engaging the service station to the printhead when the printhead is in the service area.

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of Griesmer et al into the device of Belon et al, for the purpose of engaging the service station to the printhead when the printhead is in the service area, and maintaining position of the sled and moving a sled to the proper position.

9(9) Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (U.S. Pat. 5,587,729) in view of Griesemer et al (U.S. Pub. 2004/0252154).

Lee et al discloses all the claimed limitations above, except for the following:

- **regarding claim 30**, a biasing member coupled to the driveshaft for biasing the driveshaft for biasing the driveshaft out of engagement with the first and second engagement structures

Griesemer et al discloses:

- **regarding claim 30**, a biasing member coupled to the driveshaft for biasing the driveshaft for biasing the driveshaft out of engagement with the first and second engagement structures (Paragraph 0036), for the purpose of moving a sled to the proper position.

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of a biasing member coupled to the driveshaft for biasing the driveshaft for biasing the driveshaft out of engagement with the first and second engagement structures as taught by Griesmer et al into the device of Lee et al, for the purpose of moving a sled into the proper position.

9(10) Claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over Belon et al (U.S. Pat. 6,172,691) in view of Kimura et al (U.S. Pat. 5,325,151).

Belon et al discloses all the claimed limitations above, except for the following:

- **regarding claim 56**, wherein the driveshaft includes projections, and the idler gear includes projections, and wherein in the engaged position the projections of the driveshaft mate with the projections of the idler gear

Kimura et al discloses:

- **regarding claim 56**, wherein the driveshaft includes projections/ratchet teeth, and the idler gear includes projections/ratchet teeth, and wherein in the engaged position the projections of the driveshaft mate with the projections/ratchet teeth of the

idler gear (Column 4, Lines 33 – 45), for the purpose of powering a gear by meshing a driveshaft and said gear.

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of the driveshaft includes projections, and the idler gear includes projections, and wherein in the engaged position the projections of the driveshaft mate with the projections of the idler gear as taught by Kimura et al into the device of Belon et al, for the purpose of powering a gear by meshing a driveshaft and said gear.

9(11) Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Griesemer et al (U.S. Pub. 2004/0252154) in view of Taylor et al (U.S. Pat. 6,328,412), Ota et al (U.S. Pub. 2003/0169312) and Belon et al (U.S. Pat. 6,172,691).

Griesemer et al discloses all the claimed limitations above except for the following:

- ***regarding claim 50***, a servicing sled including a rack that extends along a length of the sled, the means for retaining comprises a guide wall positioned adjacent to and extending along at least a portion of the rack, the means for translating comprises a driveshaft that engages a powered gear and the rack is retained on the rack by the guide wall in the translating position, and the means for shifting comprises a shift arm including a leaf spring, a first end adapted for contact with the printhead, and a second end secured to the driveshaft

Taylor et al discloses:

- **regarding claim 50**, a servicing sled including a rack that extends along a length of the sled, means for retaining comprises a guide wall/frame positioned adjacent to and extending a long at least a portion of the rack (Figure 4; Column 5, Lines 14 – 22, Lines 29 – 36; Column 9, Lines 61 – 67; Column 10, Lines 1 – 8), for the purpose of efficiently maintaining a print head with a translational print head service station.

Belon et al discloses:

- **regarding claim 50**, translating comprises a driveshaft that engages a powered gear and the rack (Column 7, Lines 28 – 30, Lines 45 – 55; Column 8, Lines 11 – 27), for the purpose of providing power to the sliding apparatus.

Ota et al discloses:

- **regarding claim 50**, a shift arm including a leaf spring, a first end adapted for contact with printhead, and a second end secured to the driveshaft (Paragraph 0067), for the purpose of efficiently maintaining a print head with a translational print head service station.

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of Taylor et al, Ota et al, and Belon et al into the device of Griesemer et al, for the purpose of efficiently maintain a print head with a translational print head service station and provide power to the sliding apparatus.

(10) Response to Argument

10(1) Rejection of Claims 1-2, 4, and 9 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,587,729 (Lee et al)

The Appellants arguments according to claims 1-2, 4, and 9 are moot since the rejections have been withdrawn.

10 (2) Rejection of Claims 5-6 under 35 U.S.C. 103(a) as being obvious over U.S. Patent No. 5,587,729 (Lee et al) in view of U.S. Patent No. 6,172,691 (Belon et al)

The Appellants arguments according to claims 5-6 are moot since the rejections have been withdrawn.

10(3) Rejection of Claim 7 under 35 U.S.C. 103(a) as being obvious over U.S. Patent No. 5,587,729 (Lee et al) as modified by U.S. Patent No. 6,172,691 (Belon et al) and further in view of U.S. Patent Publication No. 2004/0252154 (Griesemer et al)

The Appellants arguments according to claim 7 is moot since the rejections have been withdrawn.

10(4) Rejection of Claims 14-15 under 35 U.S.C. 103(a) as being obvious over U.S. Patent No. 5,907,334 (Hirano et al) in view of U.S. Patent Publication No. 2004/0252154 (Griesemer et al)

The Appellants arguments according to claims 14-15 are moot since the rejections have been withdrawn.

10(5) Rejection of Claim 19 under 35 U.S.C. 103(a) as being obvious over U.S. Patent No. 5,907,334 (Hirano et al) in view of U.S. Patent No. 5,587,729 (Lee et al)

The Appellants arguments according to claim 19 is moot since the rejections have been withdrawn.

10(6) Rejection of Claim 13 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,907,334 (Hirano)

A. Claim 13

Appellant argues that Hirano does not disclose a drive structure that moves between two different positions in which the drive structure engages different sleds in the different positions

Appellant states that Hirano merely discloses a color cap 34 and a black cap 37 that are moved into and out of engagement with opposite print heads 11, 20, 21, and 22. However, the Examiner maintains that the first engagement structure occurs when the first sled 10 is in position to cap 37 the print head 11, and the second engagement structure occurs when the second sled 19 is in position to cap 34 the print heads 20, 21, 22 (Figure 1).

Appellant argues that Hirano says absolutely nothing about a biasing member

The drive structure of the service station is clearly described by Hirano to move the caps 34, 37 by pivoting toward the print head between an engaged and disengaged position (Column 5, Line 47 – Column 6, Line 14). The black cap 37 and the color cap 34 are moved by a predetermined amount by the compression torsion springs 35, 38 (biasing member) and the opening-closing cams 34a, 37a whereby the caps are released. (Column 7, Lines 40-45)

10(7) Rejection of Claims 31-35, 38-39, 42 and 43 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,172,691 (Belon et al)

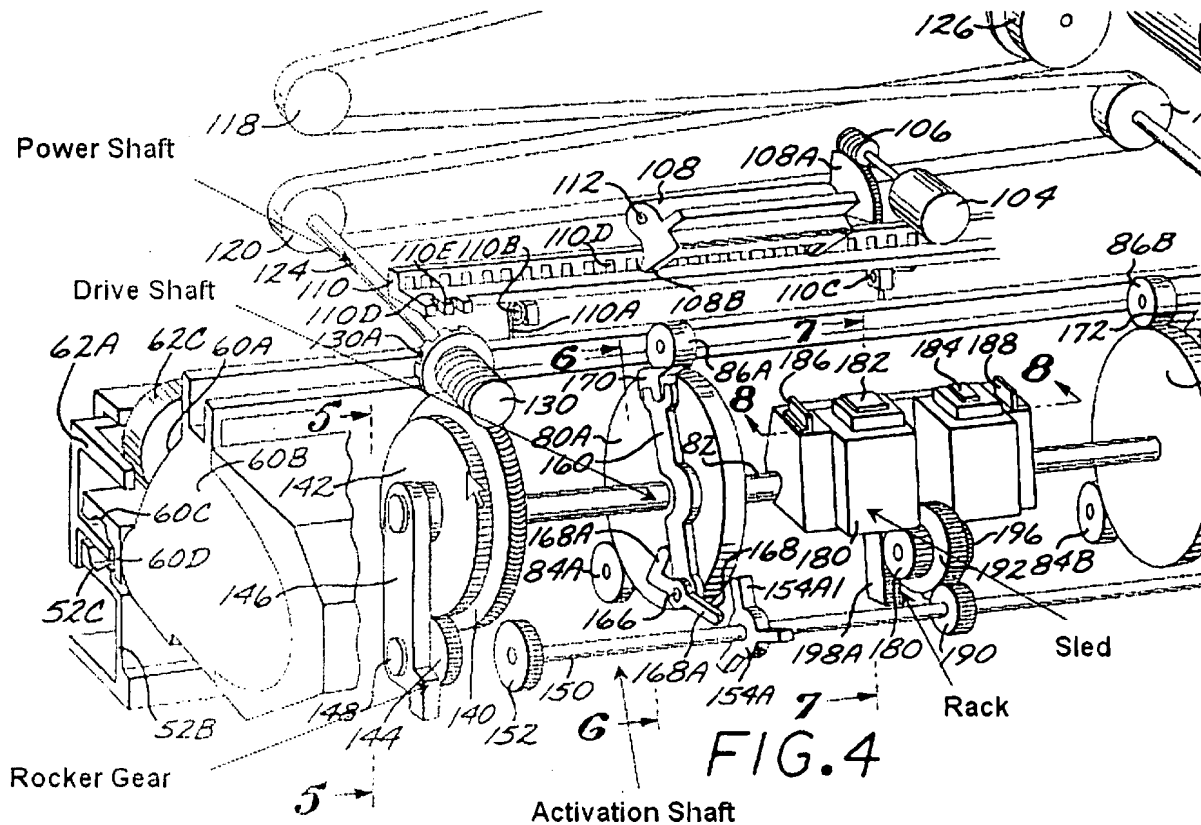
A. Claim 31

Appellant argues that Belon fails to disclose a print head servicing mechanism which includes a sled including a rack adapted to selectively engage the drive shaft.

However Belon discloses service station consisting of a sled 180 and a gear rack assembly 198 to raise and lower the sled 180. An activation shaft 150 which drives the service station, engages and disengages from a rocker gear 144, and when the rocker gear 144 is engaged the activation shaft can be driven counter clockwise as the shaft 82 (drive shaft) is driven counter clockwise (Figure 4; Column 7, Lines 45-55; Column 8,

Art Unit: 2853

Lines 11-28). The sled, rack, and activation shaft (print head servicing station) is selectively engaged to the shaft 82 (drive shaft) as claimed in Claim 31.



B. Claim 42

Appellant argues that Belon fails to disclose a drive shaft that is movable between an engaged position and a disengaged position with respect to engagement structure of a sled

However Belon discloses service station consisting of a sled 180 and a gear rack assembly 198 to raise and lower the sled 180. An activation shaft 150 which drives the service station, engages and disengages from a rocker gear 144, and when the rocker gear 144 is engaged the activation shaft can be driven counter clockwise as the shaft

Art Unit: 2853

82 (drive shaft) is driven counter clockwise (Figure 4; Column 7, Lines 45-55; Column 8, Lines 11-28). The sled, rack, and activation shaft (engagement structure of a sled) are movable between an engaged position and a disengaged position with the shaft 82 (drive shaft) as claimed in Claim 42.

10(8) Rejection of Claims 20-22, 24-28, 46-49 and 51-54 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Publication No. 2004/0252154 (Griesemer et al)

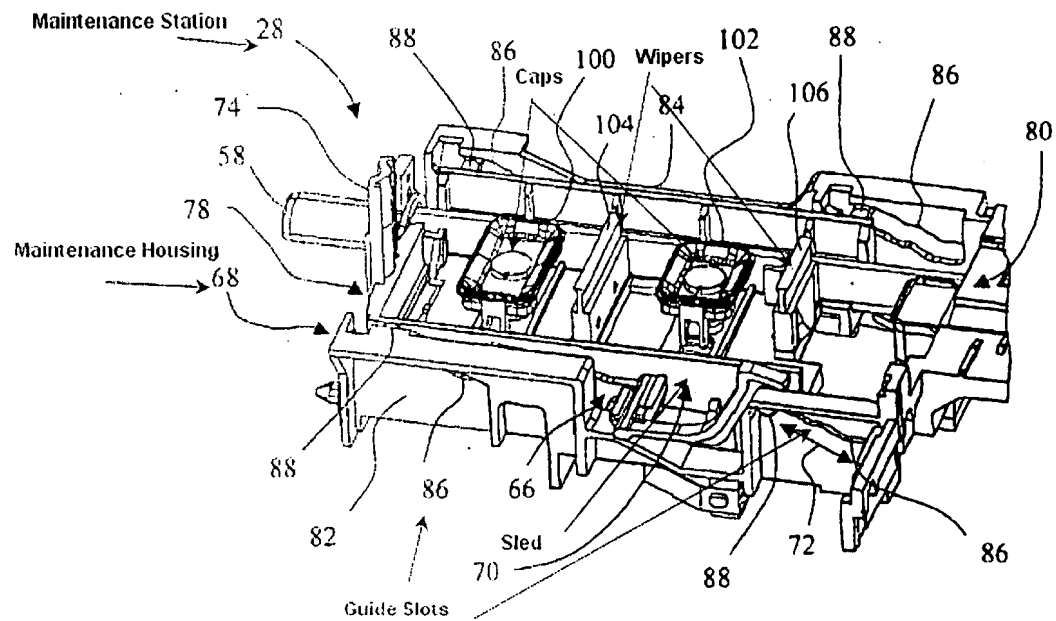
A. Claim 20

Appellant argues that Griesemer fails to disclose or suggest a printing mechanism which includes means for servicing a print head, wherein the means for servicing includes means for retaining and the first and second means for engaging and means for translating the means for servicing

However, Griesemer discloses a maintenance station 28 includes a sled 70 (means for servicing), a maintenance housing (means for retaining), a set of print head caps 100, 102 (second means for engaging) and a set of print head wipers 104, 106 (first means for engaging) (Figure 4). The sled 70 is movably mounted to the maintenance housing via the interaction between guide slots 86 and guide members 88 (means for translating) (Figure 5). The sled 70 is operable to move with the guide members 88 to three different positions, one for spitting/rest 90, second for wiping 92 (first translating position in engagement with the first means for engaging), and finally

Art Unit: 2853

for capping the print head 94 (second translating position in engagement with the second means for engaging) (Figures 4-5; Paragraphs 0034, 0044-0045).



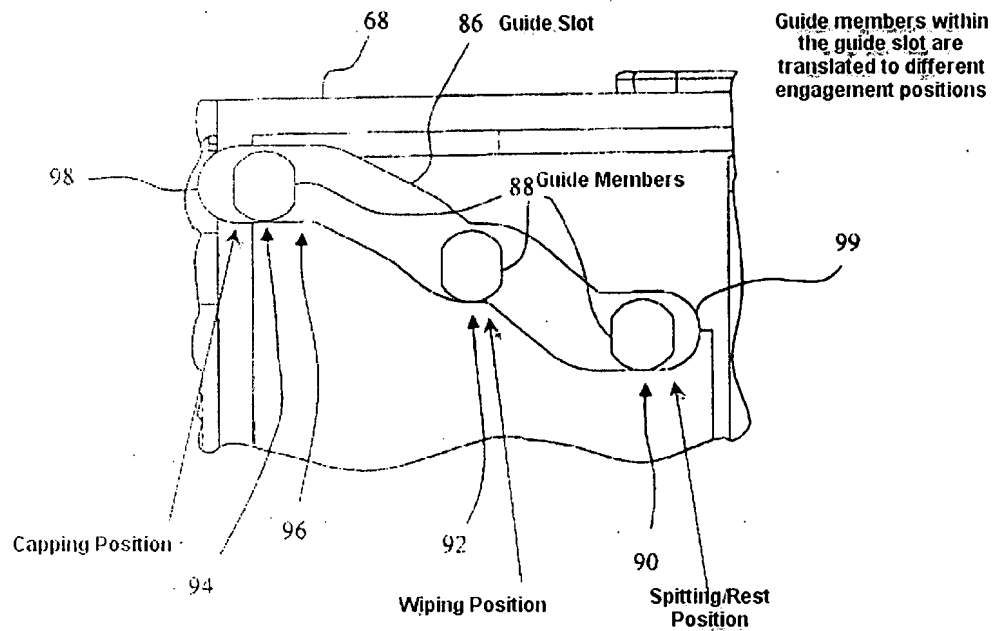


Fig. 5

B. Claim 24

Appellant argues that Griesemer fails to disclose moving a first servicing mechanism with respect to a translation device and moving a second servicing mechanism with respect to the translation device.

Griesemer discloses servicing mechanisms that are mounted on the sled 70 (translating device), which include wipers 104, 106, and print head caps 100, 102. The sled 70 is translated into engagement with multiple positions (90, 92, 94) (retaining region) such that the wiper (first servicing mechanism) and print head caps (second servicing mechanism) will perform maintenance functions on the print head. Whenever the sled 70 is moved, the wipers and caps that are mounted on the sled must also move with the sled 70. Therefore the wipers 104, 106 and caps 100, 102 (servicing

mechanisms) move with respect to the sled 70 (translating device) (Figures 4-5; Paragraphs 0044-0045).

C. Claim 46

Appellant argues that Griesemer fails to disclose means for translating and means for servicing wherein the means for servicing includes means for retaining the means for translating in engagement with the means for servicing in a predetermined zone of engagement of the means for retaining.

Griesemer discloses means for translating (guide members 88) and means for servicing (maintenance housing 68), wherein the means for servicing (68 of Figure 4) includes means for retaining (guide slot 86) and the means for translating (guide member 88) in engagement with the means for servicing (68) in a predetermined zone of engagement of the means for retaining (guide slot 86) (Figures 4-5; Paragraphs 0044-0045).

Griesemer clearly disclose a maintenance sled 70 that is movably mounted to a maintenance housing 68 (means for servicing) via the interaction between guide slots 86 (means for translating) and guide members 88 (means for retaining), with the guide slots having predetermined zones of engagement (90, 92, 94). Therefore Griesemer meets all of the limitations as claimed (Figures 4-5).

D. Claim 51

Appellant argues that Griesemer fails to disclose moving a translation device into engagement with a first region of a servicing mechanism and powering the translation device such that the servicing mechanism is moved with respect to the translation device

Griesemer discloses servicing mechanisms that are mounted on the sled 70 (translating device), which include wipers 104, 106, and print head caps 100, 102. The sled 70 is translated into engagement with multiple positions (90, 92, 94) (retaining region) such that the wiper (first servicing mechanism) and print head caps (second servicing mechanism) will perform maintenance functions on the print head. Whenever the sled 70 is moved, the wipers and caps that are mounted on the sled must also move with the sled 70. Therefore the wipers 104, 106 and caps 100, 102 (servicing mechanisms) move with respect to the sled 70 (translating device) (Figures 4-5; Paragraphs 0044-0045).

10(9) Rejection of Claims 16-18, 30, 36-37, 40-41, 44-45, 50 and 55-56

The Examiner maintains the rejection of claims 16-18, 30, 36-37, 40-41, 44-45, 50 and 55-56 due to the reasons given above

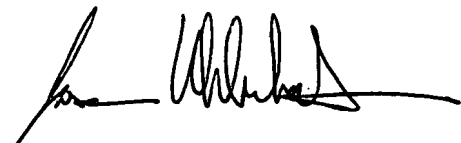
(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Art Unit: 2853

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Jason Uhlenhake
August 31, 2007

Conferees:



STEPHEN MEIER
SUPERVISORY PATENT EXAMINER

David Blum 

Stephen Meier 